Practicing in Sunny France for the Mastery of the Skies.

HOW MR. FARMAN, WHO KNEW NOTHING OF MOTOR-AEROPLANES, ORDERED ONE READY MADE, LEARNED TO FLY AND BROKE ALL EUROPEAN RECORDS.

Ignorant of Aeronautics, He Astonishes France by Becoming an Expert in Short Order.

Special Correspondence of The Star.

PARIS, November 8, 1907.

"FLYING is now an open secret. Any one will fly within a few months!"

So speaks Henry Farman to his brothers and intimates of the Palais de l'Automobile. He is the Paris sport who has flown oftenest, swiftest and longest, both in time and distance; he is the second to have made a curve while flying; he flies daily, always beating his own records and all others; and, before these lines are printed, he may easily have done the "closed kilometer" of the Deutsch-Archdeacon prize, conditioned to proclaim the scientific success of a true flying machine.

Henry Farman is also the Paris sport who, knowing nothing of these motor aeroplanes, ordered one ready made and simply began learning how to fly in it.

He is no flying machine inventor. He has made none of the disheartening experiments with forms of planes, with gearings, propellers, motors, rudders, centers of pressure, centers of gravity and all the rest that have kept Santos-Dumont, Ernest Archdeacon, Louis Bleriot, Gabriel Voisin, Capt. Ferber, Henry Kapferer, Louis Vuia and Robert Esnault-Pelterie busy on the ground.

Henry Farman is different from an inventing gilded youth like Santos; different even from those strangely modern Paris business men who find both taste and time to be hard sports. Born of English parentage in Paris he, with his two brothers, Maurice and Richard, grew up in the automobile trade from the beginning, became road racers of renown and entered the rich retail trade at the right moment. Business has not prevented him from giving much time, not only to spherical ballooning, but to astronomy—which is a hobby with him; and at once utterly practical and completely a dreamer, man of commerce and disinterested technician, he also saw the right moment to begin to fly—and lost no time in useless preliminaries.

It was at the moment when the Delagrange motor-aeroplane, built by the first flying machine factory in the world had flown with a man 200 feet in a straight line.

Delagrange, the Paris sculptor, had ordered it from Bleriot & Voisin, building for the general public at the Surcouf plant, near Billancourt, outside Paris. Delagrange may have had his ideas about its form and disposition; but the Voisin brothers had enjoyed immense experience with motorless aeroplanes towed over Lake Geneva by Ernest Archdeacan's 100-horsepower motor boat and later on in motor-aeroplanes that scarcely worked, with Louis Bleriot, a studious gilded youth, possessing a big block of motor stock.

Learning the Bird's Trade.

For Delagrange they built a motor-aeroplane that actually flew in a straight line, on March 30, 1907, over the famous grounds of Bagatelle in the Paris Bois. It was not so long a flight as Santos-Dumont had accomplished in November previous, but it was the flight of a machine that could be duplicated for cash, on an order, in straightforward business manner, without asking favors. That same day, therefore, Henry Farman made a contract with Bleriot & Voisin.

The contract stipulated they deliver him a motor-aeroplane within a year. Before payment be made it must have done a kilometer and a half in a closed loop and descended to earth without harm.

As a fact, they delivered him his motor-aeroplane in less than six months; and it is the series of trials to fulfill the last conditions of the contract that the cable is reporting to you almost daily at the present moment. This explains why Gabriel Voisin is so much in evidence in Henry Farman's flying. He, with his brother and young Bleriot, are probably more interested in its winning the Deutsch-Archdeacan 100,000 francs prize, in a business way, than is the sport who amuses himself by learning the bird's trade.

There you have the situation. A flying machine—improved on the model of one that has flown short distances—is ordered by and delivered to a road-racing, break-neck automobile sport, with a dreamy astronomical bent and any quantity of English practical straightforwardness.

HENRY FARMAN

And the first thing Henry Farman does is to sit in the machine quietly, before it is actually finished, practicing the handling of its all-important vertical rudder.

The vertical rudder—it is the secret of the motor-aeroplane.

You understand what a motor-aeroplane is? It is a flying machine without any gas bag to help it rise into the air.

You can take a playing card and throw it so that it will skim the air for a long distance. This is what the motor-aeroplane should do once it is high enough in the air, with a swift-turning screw propeller at its rear to keep pushing it on that it may continue skimming.

Kites find support upon the air while held still by their cord, so long as the natural wind of heaven rushes beneath them, on condition that the boy has rigged the kite at the right angle. When the wind dies down, however, every boy knows that he must run with his kite, pulling it against the still air.

This is what the motor-aeroplane does—it must skim onward always or it will begin to fall. If you imagine a boy running with his kite on a still day you will have the conception—very much, at least. Why must the boy continue running with his kite? To arrive at the same thing as making wind pass beneath it, backward, and keep pushing it upward as it moves on.

And this brings us to the all-important vertical rudder. You can see it plainly in all the photographs—the box-like thing projecting in front of the machine. Its vertical partitions are simply to hold its two plane surfaces together.

It works on a leverage point at the front of the aeroplane, and Farman, sitting there in front, controlling its rear handles, lifts or lowers—what? Why, he practically lifts or lowers the front end of his aeroplane.

Close behind him is the 50-horsepower Antoinette eight-cylinder motor, working very directly, without loss by gearing, on the two-bladed aerial propeller. There are plane surfaces on each side of him, plane surfaces above him like an awning—and more such plane surfaces behind him—just to give a total surface for the wind to push up—as compact, strong and untipping as possible—on condition that the wind can get beneath and push it up.

How does the wind get beneath to push it up? Why, Farman lifts that vertical rudder—lifts the front of his whole machine at the right moment. He tried it the first time on October 1, 1907, in the Bleriot-Voisin yard, with Gabriel Voisin calling to him to go slow and not break the apparatus!

The motor started. The propeller began whirling 1,500 revolutions. It caught hold of the air and pushed the whole apparatus, rolling on its little wheels, at a good rate over the ground. Then, when he reached a certain speed upon the ground, Henry Farman lifted the head of the apparatus.

Correcting the Line.

It is called the "angle of attack" upon the air. The machine rushed against the air diagonally. The air rushed beneath the machine. The wheels quit the earth—the whole apparatus rose and skimmed diagonally upward! The machine was flying!

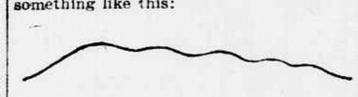
"Come down!" cried the Voisins. Henry Farman saw as well as they that he must come down instantly; there was a fence ahead and buildings on beyond. He lowered the vertical rudder. The wind no longer caught the onward-rushing planes at an up-pushing angle, and down came the apparatus by its weight, diagonally, like a hawk skimming downward.

He had stopped the motor. The machine rolled on its wheels awhile and stopped.

They took it to a far greater field—the military maneuver grounds of Issy, outside Paris, where eight or ten other flying machine experimenters had obtained permission to build their sheds and all experiment together.

Daily thenceforth Farman practiced flying in a straight line. On October 15, for example, he made ten flights. On October 25 he made fifteen flights, each varying between 100 and 200 yards.

Even flying in a straight line takes a deal of practice. Regularly Farman would rise diagonally to a height of ten or twelve yards and try to go onward horizontally. He tried, but the air-skimming machine rose and dipped, and rose and dipped, and rose and dipped, but always dipping more than it would rise, until at last in struck the earth. The line was something like this:



Birds often have to do the same thing, only they recover and mount up again more promptly after each dip. Farman would get up proper speed on earth, then lift the machine's head. The air would get beneath the on-rushing planes, and it was extraordinary to see the machine mount on up diagonally like Elijah's chariot; only why did he not go on up, up, up?

First, there was caution not to go too high and come down smashing a valuable machine not yet paid for; there was lots of time ahead to practice. Secondly, there always came a moment when Farman would unconsciously move his body forward, which would lower the head of the machine, or lean to one side which would give a tip that must be compensated, or the motor would give less force, slowing the attack upon the air. And so on. Each such accident would cause a downward dip.

He would lift the machine's head instantly, and the rise would follow the dip; and, day by day, the upward curve would more and more begin to equal the down curve, until on Saturday, October 26, 1907, in presence of the official timekeepers of the Aero Club de France, he flew in a straight line 350 yards and then 403 yards. This latter was the straight-across limit of the Issy maneuver grounds—making allowance for the necessary space to get up speed upon the ground.

"I'll try it diagonally," called Farman, and, starting from one corner, flew a straight 780 yards to the far corner at the other side—and could have kept on, easily, a kilometer, two, three—who knows? A hundred witnesses affirm it. There are photographs, snap-shotted as he came down. They show that he came down by a willful downward maneuver of his vertical rudder.

"I have got the trick of straight-ahead flying," he said that night to his admirers at the Palais de l'Automobile. "Now I'll attack turning!"

At this writing he has turned again and again from the straight line by a quarter of a circle. Several times he has come down and slightly damaged the machine, and there are scientists on paper, mostly from the Polytechnique, who explain why turning with one screw-propeller will be quite impossible.

Practice or Theory.

Do you know what they call the gyroscope? It is a scientific toy—a round top that, by its rapid revolutions, gets peculiar immobility. On the point of a pencil it maintains itself straight. Give it a push over and it comes back. To change its plane of rotation requires a comparative effort.

Now, they say, the single screw-propeller of the Farman aeroplane, revolving at 1,500 turns, becomes a gigantic gyroscope. Going straight ahead is all right. But when Farman tries to turn it opposes that pig-headed resistance, compromising longitudinal equilibrium. That is whiy the apparatus jumps suddenly into the air when he tries to turn to the right—and dives when he attempts to turn to the left.

"I know nothing about gyroscopes," says Henry Farman, "and I can already turn a quarter circle."

"Have two propellers, revolving in opposite directions, and the difficulty will be obviated," says the Polytechnique school.

"Let's wait and see," says Farman.

"We will see you go skidding!" says the Polytechnique. "When you shift your horizontal rudder you will turn your quarter circle all right, but during the next moment the acquired speed will oppose itself to your change of direction—and you will skid like an automobile that has turned too short on a slippery road. Slippery roads are nothing in comparison with the slippery air!

"We see but one possible way out of the difficulty," conclude the mathematicians. "You will have suddenly to tilt the whole apparatus downward on the inside curve—like a bicycle racer rounding a tilted track. Birds do it when they want to turn. They do not depend on their tails for horizontal rudders. They slant their whole bodies inward—outstretched wings and all."

"That's just what I'm learning to do at present!" answers Henry Farman.

STERLING HEILIG.

Finds Turning Difficult, But Says Any One Will Fly Within the Next Few Months.

TENTH ANNIVERSARY

TEN MENUS, DECORATIONS AND SUITABLE GAMES.

The tin wedding that marks the tenth anniversary may be made a very brilliant affair and one provocative of much fun. The invitations sent out may be of little squares of sheet tin, the wording being made with paint or a sharp-pointed instrument. These may be inclosed in envelopes to fit. For the buffet luncheon have a large table set entirely with tin and suitably decorated. On the buffet have the tin plates, tin cups, knives, forks and spoons for the different courses. The guests may stand or sit in the dining room.

Leave the buffet table bare excepting for doilies made from tinfoil or silver paper, or put on a white cloth with decorations of tinfoil. The centerpiece may be a jelly mold holding at this season any of the wild flowers, such as golden rod and asters or queen's lace with bayberry sprigs. On either side of the centerpiece have four tin candlesticks, using candles of a color to fit in with the central decorations. Have shades covered with tinfoil.

For serving plates, pie and layer cake tins should be used. Slender tin mugs for tumblers, individual gem pans for salad, and tin trays for sandwiches and cake.

If you wish to carry out further the tin idea the refreshments may all be tinned, and here again is a bountiful supply to choose from. There are baked beans in tin cans or baked in individual tin molds, tinned meats for the sandwiches, tinned bouillon, tinned biscuit and wafers, tinned fish of various kinds, cheese and bonbons in tinfoil.

The menu might be something like this: Bouillon or consomme served in tin cups, lobster or salmon creamed in little dishes with sandwiches, jellied chicken or chicken croquettes with rolls, and ice with cake, then coffee.

For games you can play the children's old-fashioned game of "Spin the Platter," or "Tin! Tin!" Furnish each guest with some musical instrument of tin, appoint a leader and have an impromptu presentation of some popular opera or simply a collection of popular songs. Among the tin instruments suited to the tin orchestra are trumpets, harmonicas, jews-harps, cymbals, horns, a comb and a tin pan for a drum. This in case you have lenient neighbors or are a suburbanite with ample room.

In decorating the house use tin pails, pans, quart cups, steamers, etc., for holding flowers and vines. Get from some tinner the wavy trimmings of tin and hang from the chandelier down, interspersed with vines. If your guests are expected to bring with them tin gifts, ask each one as she or he arrives to tie the favor to uneven lengths of yellow and green baby ribbon fastened to a doorway or the chandelier in the parlor, where they will keep up a merry jingle.

How the Japs Pull Teeth.

The Japanese dentist does not frighten his patient with an array of steel instruments. All his operations in tooth drawing are performed by the forefinger and thumb of one hand. The skill necessary to do this is acquired only after long practice, but when once it is obtained the operator is able to extract half a dozen teeth in about thirty seconds, without once removing his fingers from the patient's mouth, says Home Notes. The dentist's education commences with the pulling out of pegs which have been pressed into soft wood; it ends with the drawing of hard pegs which have been driven into an oak plank with a mallet.

Algerian vineyards produce more grapes per acre than those of any other country.

WHERE WILL AMERICA BE WHEN OTHER POWERS BUILD WINGED FLEETS?

Uncle Sam Begins to Realize That France, Germany and England Are Providing Themselves With Aerial Armies.

Written for The Star.

WHERE will the aerial navy of the United States rank in the days to come when the great powers go to war in the skies?

This question appears to have aroused Uncle Sam from a nap into which he had fallen.

A congress of aeronauts met in New York only the other day and heard speeches from a number of men who know something of diplomacy, who read the signs of the times and who, above all, are patriots. These men—Rear Admiral C. N. Chester, U. S. N., and Gen. Allen, U. S. A., among the number—sounded a note of warning which found immediate answer in a recommendation to Congress, and which has echoed through the country.

In a word, the speakers at the congress showed just how America had failed to realize the significance of what her rivals were doing with the airship as an auxiliary to their naval and military establishments. They showed that Uncle Sam had dozed for a moment, and that while his head drooped on his bosom a toy of yesterday had become a powerful engine which was destined to play an important part in the history of the future.

And they showed, too, that the brains and hands which brought about this development were English, French and German, but not American.

America is used to leading, and Americans are not comfortable in the rear rank of any procession, so it did not take the convention of aeronauts long to pass a resolution urging upon Congress the importance of providing funds for an aerial fleet. They chered loudly at a statement of Gen. Allen, who said that he thought Secretary Taft would ask for $200,000 at the next session to maintain an aeronautic branch in the army.

So the matter will come right before Congress, and while every effort to increase the strength of the naval or military establishment of the country raises more or less opposition, it is believed that the national lawmakers will not hesitate over a matter which, advocates of the plan argue, involves the prestige of the nation. Senators and representatives are to be appealed to upon patriotic grounds, and the scream of the eagle will doubtless echo through the halls at Washington next month.

In France and Germany.

Over in France there are a couple of dirigible airships which have been tested officially and found to operate nearly perfectly. "La Patrie" and "Ville de Paris," two steerable balloons, have been maneuvering successfully for some time, and only recently Premier Clemenceau and Gen. Picquart took a voyage in "La Patrie," which served to indicate how seriously official France viewed the airship as a military aid. With Santos Dumont, M. Deutsch, Count de la Vaulx and other enthusiasts working and encouraging work on the aerial problem, and aided by the government, the development of the airship has moved more swiftly in France than with any other European power.

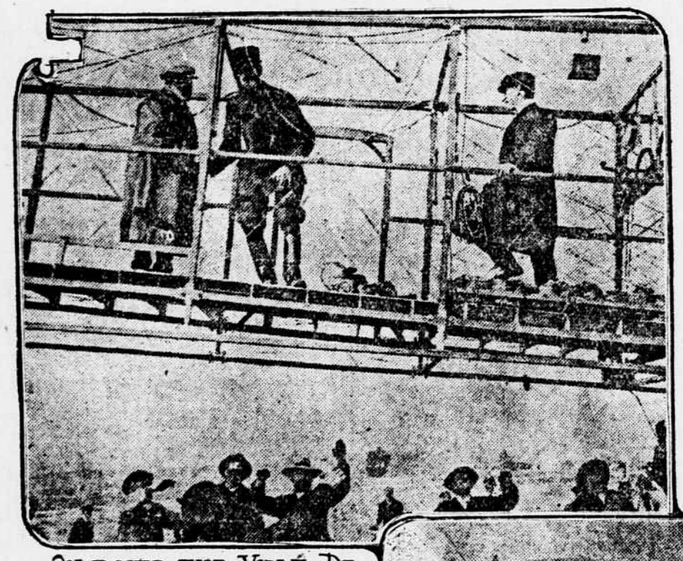
Germany, too, has been very busy. The kaiser himself, is an enthusiast on the subject of aeronautics, and he has lent his aid to every move which had for its object the development of a practical dirigible balloon. As a result Count Zeppelin has produced an airship which recently made the remarkable record of remaining aloft seven hours, during which it was under complete control.

Another army airship is making daily flights over Berlin, and recently it circled about the kaiser's palace in the face of a heavy wind, fully 1,800 feet above the ground. This balloon is fitted with a screw and vanes which drive the ship forward at the rate of 45 feet a second. The motor is run by gasoline, which is kept in a receptacle in the framework above the car. There are two small balloons holding compressed air inside the great envelope, and by filling or emptying these the airship is raised or lowered without affecting the main gas bag.

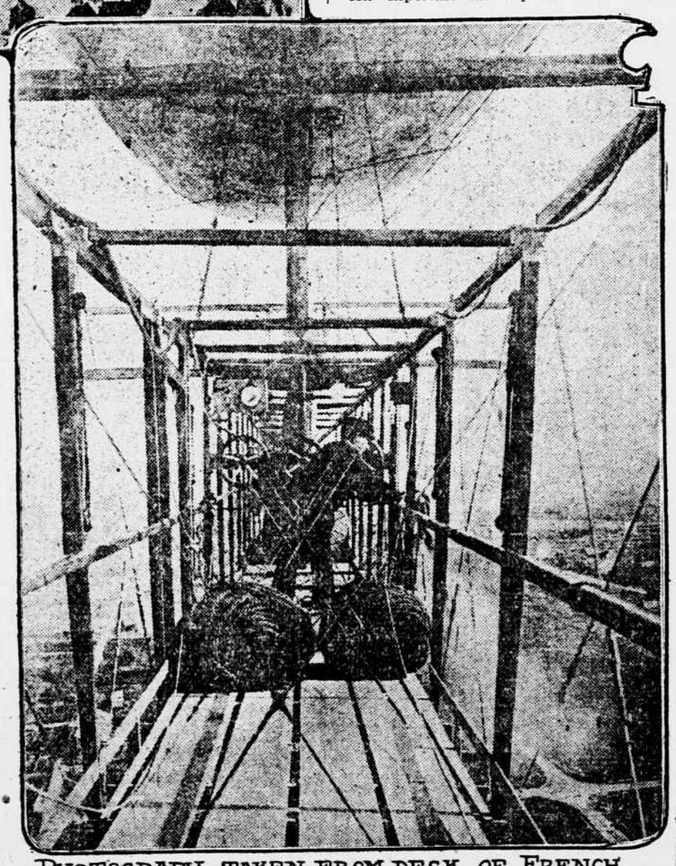
John Bull in the Ring.

England has been the latest power to join the aerial fleet movement. A few days ago she launched her first war airship at Farnborough, and the flight was a complete success. The British balloon is a cigar-shaped affair, 100 feet long, and is fitted with a more complicated set of sails and vanes than the French and German machines. It was made at the Aldershot balloon factory, but the details of its construction have been very carefully guarded.

Meanwhile war experts, artists and seers have vied with one another in depicting the battle of the future, a terrible struggle in the air between the winged fleets of contending powers. The war balloon has been designated as an instrument for dropping high explosives from the clouds upon cities and camps of an enemy, and for serving a belligerent as a means of scouting and observation. The "heavier-than-air" aeroplane—the cloud ship which depends upon its forward velocity to maintain its position aloft—has been depicted as the armored cruiser of the sky on which the great guns will be mounted and from which torpedoes and shells will be hurled.



ON BOARD THE VILLÉ DE PARIS, A SUCCESSFUL FRENCH ARMY AIRSHIP.



PHOTOGRAPH TAKEN FROM DECK OF FRENCH AIRSHIP "FLYING HIGH ABOVE" PARIS

Call for Federal Aid.

But through it all Uncle Sam seems to have slumbered until the congress of aeronauts woke him up, by calling for federal aid. American inventors have experimented with both kinds of airships, most notably the Wright brothers, whose aeroplane has performed some remarkable feats, but up to date the government has declined to recognize the importance of federal encouragement. Indeed, it is reported from time to time that the Wrights are negotiating with a foreign power for the sale of their invention.

An experimental department of aeronautics is needed far more than a construction department, inasmuch as the present-day airship, with all its startling feats, is far from perfection. While it will undoubtedly play a most important part in the battles of the future, its operation will entail a tremendous risk to the lives of the men who sail it, unless some safety device now unknown is developed. With this thought in mind, the powers across the sea are straining every nerve in aerial experiments.

Will America ignore a sign of the times so vital in its bearing upon the country's future prestige?

Houses and Their Names.

House owners are sometimes rather unfortunate in their selection of names for their abodes, and in suburbia house naming is occasionally rather ludicrous. Thus, "The Maples" have never a maple near, "The Rosary" only exists in the imagination, "Sunnyside" is the most depressing villa residence, and houses named after the English lakes no more suggest the lake district than Fleet street suggests the Bois de Boulogne.

The Anglo-Saxon word "hyrst," signifying a forest or wood, has become "hurst" in house naming, and "wood" and "nolt" have the same meaning; all house names ending with these terminations are pretty and not unsafe to choose.

It is curious to note that in Hastings and St. Leonards quite a number of houses have typically Saxon names, perhaps to commemorate the great Saxon tragedy of which the name of Hastings is reminiscent, says Woman's Life.

A curious custom in parts of America is to call a house by its owner's Christian name transposed, thus in Quebec an old residence is locally known as "Darnoc," and in other districts may be found "Senga," "Aidyl" and "Trebor," and some times a combination of two names is used, one favorite being "Lillemyn"—a fanciful union of the names of Lillian and Minnie.

Drop Earrings Worn Again.

The fancy for the old-fashioned long drop earrings is more than a fad; it has become an actual fact, and is put into practice for street as well as for evening wear. A stunning looking blond wore a lovely pair of these ornaments in jet, such a fitting finish to her handsome toilet.

Stones lightly set with gold are preferred to those entirely gold—turquoise, coral and amethysts being generally favored. Drop pearls are also used, and those who have the screw earrings are having the drops added. This can be done with any kind of screw earrings, the drops being selected to match if desired.

First Pocket Handkerchief.

The pocket handkerchief was not in vogue until 1540, when a beautiful Venetian lady appeared carrying one, and from this time it became common use in Italy. The French were quick to follow the fashion, and pocket handkerchiefs were made of costly materials and richly embroidered. They were brought to England from France, says Home Notes, but Germany was slow to adopt their use, and when at last the pocket handkerchief was introduced it represented the great wealth and noble lineage of its possessors.

Italy's Future King.

Prince Umberto of Piedmont, the heir to the Italian throne, who is now three years old, is a strong, sturdy boy, brought up by English methods, going barefooted when at the seaside and wearing sandals in Rome, says Home Notes. He already chatters in Italian and knows a little French and English, and of these two languages he understands English the better.

TO PROTECT THE EARS

SPECIAL CARE IS ESSENTIAL IN WINTER.

Ear troubles are frequent in cold weather. They develop largely through the action of cold upon wax in the auditory canal, and the proper care of this becomes a matter of importance. To remove too much of the wax means to run danger of injuring the hearing; to let too much remain is neither cleanly nor wise.

The safe manner of cleaning should be understood by every person, for the ear is one of the most delicate organs we have, and the risk of doing permanent damage is ever present.

According to one of the best known aurists in New York, the safest method of daily cleaning is to put a bit of old thin linen, such as a handkerchief, over the tip of the little finger and insert this into the orifice. The cloth should not go deeper than the finger tips can reach. In this way there will be no chance of hurting the hearing.

While this is undoubtedly a safe, scientific way, the average woman will find a hairpin more to her liking. Under no circumstances should a stick or other pointed implement be used, but the loop at the end of a hairpin prevents its doing harm unless it is thrust in so hard as to cause pain. One is not likely to do this.

To wash the interior wet a bit of linen and rub on some soap, then wrap this with one thickness only about the pin loop and put it gently into the ear.

The cloth may be turned slowly and then at once removed and a fresh part taken to repeat the operation. Rinse by wetting the cloth another time in warm water.

Cold water should never be used in cleaning the ears. It will tend to harden the wax, and once this happens deafness, though only temporary, will usually ensue.

Warm glycerin is the greatest aid when there is trouble caused by accumulated and hard wax. In using this put a few drops into the ear at night and rest the head so that the lotion will not run out. In the morning a careful cleaning with hot water may be sufficient to remove the obstruction, but if it is not, one should go immediately to a physician to have the canal cleaned.

Violent blowing of the nose is a source of danger to the ears, and not infrequently causes temporary deafness by closing the auditory canal. On the other hand, sometimes the ears may be cleared when temporarily stopped by holding the nostrils closed with the fingers and then making an effort to blow. The air, making its escape, finds no outlet through the nose, and so rushes to the ears, thus often clearing the passage.

If one effort in this direction, however, accomplishes nothing, it should not be tried again, for the risk of doing harm to the ear drum becomes too great.

A Charming Chinese.

The style of a Chinese lady's dress apparently never alters, but if she can afford to do so she wears nothing but silk. The first garment that she dons is a sort of apron, a plain piece of silk which is tied round the waist and overlaps behind. Then comes underjacket and overjacket, trousers and apron. In cold weather extra jackets, thickly wadded, are donned, says Home Notes.

If the fair Chinese is going to receive friends, or for any other reason wishes to appear specially charming, she paints her face with a paste made of rice flour, which dries and gives her a most cadaverous appearance.

A white monkey, the first albino of its kind seen in South Africa, has lately been captured in the bush by a resident of Port Elizabeth.—Home Notes.